

1 **CLAIMS**

2 1. A system for enabling interoperability between two graphics  
3 technologies, comprising:

4 a first graphics system configured to render window content in a first mode,  
5 the first graphics system being further configured to reference a first type of  
6 window using a token associated with an instance of the first type of window;

7 a second graphics system configured to render windows in a second mode,  
8 the second graphics system being further configured to reference a second type of  
9 window without a need for the token used by the first graphics system; and

10 an interoperability component configured to cause a dummy token to be  
11 created for an instance of a window of the second type and to use the dummy  
12 token if called to perform a graphics related action on the instance of the window  
13 of the second type.

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15 2. The system recited in claim 1, further comprising an application  
16 program including a first window and a second window, the first window being of  
17 the first type and the second window being of the second type.

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19 3. The system recited in claim 2, wherein the first mode comprises a  
20 compositional mode of graphics technology.

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22 4. The system recited in claim 2, wherein the second mode comprises an  
23 immediate mode of graphics technology.

1           5.     The system recited in claim 1, wherein the token comprises a window  
2 handle.

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4           6.     The system recited in claim 1, wherein the second graphics system is  
5 configured to create a mapping from the token to a node in an internal construct  
6 used by the second graphics system to manage windows of the second type.

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8           7.     The system recited in claim 6, wherein the internal construct  
9 comprises a visual tree, and the node comprises a visual.

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11          8.     The system recited in claim 1, wherein the second graphics system is  
12 further configured to create a render target for receiving rendered window content.

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14          9.     The system recited in claim 8, wherein the render target resides in  
15 system memory.

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17          10.    The system recited in claim 8, wherein the render target resides in  
18 video memory.

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20          11.    The system recited in claim 8, wherein the render target records  
21 rendering commands generated for windows of the second type and that are played  
22 back during composition to generate display output.

1           **12.**   A computer-readable medium having computer executable  
2 components for enabling interoperability between two graphics technologies,  
3 comprising:

4           an interoperability component that interfaces with an application program,  
5 the application program including a first window and a second window, the first  
6 window being compatible with a first graphics system that uses tokens to reference  
7 windows, the second window being compatible with a second graphics system that  
8 does not rely on the tokens; and

9           a mock token associated with the second window, the mock token  
10 indicating that the second window is compatible with the second graphics system.

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12           **13.**   The computer-readable medium recited in claim 12, further  
13 comprising a mapping, maintained by the second graphics system, from the mock  
14 token to a node in an internal construct used by the second graphics system to  
15 manage the second window.

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17           **14.**   The computer-readable medium recited in claim 13, wherein the  
18 internal construct comprises a visual tree, and the node comprises a visual.

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20           **15.**   The computer-readable medium recited in claim 12, wherein the  
21 second graphics system is further configured to create a render target for receiving  
22 rendered window content.

1           **16.**    The computer-readable medium recited in claim 15, wherein the  
2 render target comprises a software render target.

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4           **17.**    The computer-readable medium recited in claim 15, wherein the  
5 render target comprises a hardware render target.

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7           **18.**    The computer-readable medium recited in claim 15, wherein the  
8 render target records rendering commands generated for the second window and  
9 that are played back during composition to generate display output.

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11          **19.**    The computer-readable medium recited in claim 12, wherein the  
12 mock token is associated with a device context associated with the second  
13 window.

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15          **20.**    The computer-readable medium recited in claim 19, wherein the  
16 device context comprises a null device context.

1           **21.**    A computer-implemented method for enabling interoperability  
2 between two graphics technologies, comprising:  
3           receiving a request to create a new window;  
4           determining if the new window is of a type associated with an alternative  
5 graphics system;  
6           if so, creating a token for the new window;  
7           creating a new visual to be created in connection with the new window, the  
8 visual being a construct associated with the alternative graphics system; and  
9           associating the token with the new visual.

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11           **22.**    The computer-implemented method recited in claim 21, wherein if  
12 the new window is not of the type associated with the alternative graphics system,  
13 rendering the window in accordance with a conventional graphics system.

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15           **23.**    The computer-implemented method recited in claim 21, further  
16 comprising receiving an instruction to render display content to the new window  
17 referenced by the token, looking up the new visual based on the association  
18 between the token and the new visual, and rendering the display content to the  
19 new visual.

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21           **24.**    The computer-implemented method recited in claim 23, wherein  
22 rendering the display content to the new visual further comprises issuing rendering  
23 commands to a render target associated with the new visual.

1           **25.**     The computer-implemented method recited in claim 24, wherein the  
2 render target comprises a software render target.

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4           **26.**     The computer-implemented method recited in claim 24, wherein the  
5 render target comprises a hardware render target.

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7           **27.**     The computer-implemented method recited in claim 24, wherein the  
8 render target records rendering commands generated for the new window that are  
9 played back during composition to generate display output.

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11           **28.**     A computer-readable medium encoded with computer-executable  
12 instructions for performing the method of claim 21.